A tramp in the North Carolina mountains. I.

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One of the wildest regions east of the Rockies, and at the same time one of the most interesting to a botanist, is the mountain region of western North Carolina. The combination of low latitude and great altitude produces, as might be expected, a varied flora.

It was the good fortune of the writer to be one of a party who tramped through these mountains during the past summer on a botanizing trip. Our route was two hundred miles long, extending through Jackson, Macon and Swain counties. We had laid it out in such a way as to cover both mountain peak and valley.

One might fill pages with descriptions of the beauties of the scenery, but we must here confine ourselves to the flora, and that briefly. Although our trip was made just too late for the spring flowers and before those of summer were fully developed, we identified about five hundred and fifty species without any attempt at an exhaustive study.

Of course the Compositæ headed the list in number of species, but to us the most striking feature was the great abundance of the Leguminosæ, both in species and individuals. The soil is a red clay and seems to be peculiarly adapted to them. We found thirty-five species in blossom. Along the roadsides, especially in the valleys, were great quantities of the showy flowers of the Butterfly peas, Clitoria Mariana and Centrosema Virginiana. Scarcely less abundant, but perhaps more local, was the Schrankia uncinata. The Cherokees call this the "Bashful brier," in allusion to the sensitive character of the leaves. Of course, the common clovers are seen, though the white clover is not so abundant as in the north. The turf by the roadside in many places is made up by the stalks of a small leguminose plant with trifoliate leaves, somewhat resembling clover. It was not in blossom at the time we saw it.

Desmodiums are very abundant and of many species. One of the most variable of the Leguminosæ that we found is the Stylosanthes elatior. Its yellow blossoms were everywhere, but its stalks were sometimes erect, at others almost trailing, while the leaves vary in form and size. A very showy member of the family is the Thermopsis Caroliniana.

Its tall, simple stalk and long raceme of yellow flowers catch the eye here and there on the mountain side, though it is not abundant.

Among the other interesting Leguminosæ which one may hope to find are Rhynchosia tomentosa, var. erecta, Phaseolus perennis and P. helvolus, Tephrosia spicata, and a dozen others.

In striking contrast with the abundance of Leguminosæ is the almost total lack of Cruciferæ. We found only four species in all the mountains.

Of the Compositæ, the most conspicuous members in July are the Cacalias and the Silphiums. C. atriplicifolia and C. reniformis represent the former genus, while there are three species of Silphium found in abundance. Of course Asters are plenty, though our trip was a little too early for them. At Tuckaseege Falls we found Cynthia Dandelion and its variety montana growing abundantly on rocks continually wet by the spray. Elephantopus tomentosus was another species new to us.

The Rubiaceæ are everywhere well represented by Diodia teres, several species of Houstonia, which are among the commonest weeds, and by a number of Galiums.

The list of common flowers might be almost indefinitely extended. Probably none would sooner attract the attention of a stranger than the "wild potato vine," Ipomœa pandurata, growing with the beautiful passion flower (Passiflora incarnata), and its smaller relative, P. lutea, everywhere in the cornfields.

We have spoken thus far of some of the common flowers one may hope to meet with in a tramp through the mountains in the latter part of June or in July, purposely omitting the Ericaceæ till some future time. Now let us turn to the question of habitat.

We climbed Whiteside and Wayah Bald, two of the highest peaks in that section of the state, naturally hoping to find many new plants. In each case we were somewhat disappointed. On Whiteside, though the species were numerous, we found very few things not afterward seen in the valleys, the only ones being the little heath, Leiophyllum buxifolium and the rock fern, Asplenium Ruta-muraria. On Wayah Bald we found Pogonia pendula and an abundance of Potentilla tridentata. On the slopes grew the Chamælirium luteum, which is usually considered a lowland plant. Though we found so few new plants on these high summits, we were

greatly surprised at some of the things we did find. On the very crest of Whiteside, in the dry soil, were no less than four species of Orchids, all of them found in the swamps of the lowest parts of the state visited. This was not an unusual case, for it became an object of common remark among us that distinctions of habitat fail here. Most of the plants seem to be found indifferently on the mountain tops and in the valleys, on dry slopes or in the swamps.

The effect of altitude on the time of blossoming of some of our common plants was clearly seen. We often found the Hypoxys erecta in blossom, and on Whiteside we found Aquilegia Canadensis in bloom on the 12th of July, and on the Nantehala mountains a week later the Tiarella cordifolia, both early spring flowers. It was unexpected to find these flowers in their prime so late in the season at a point so far south.

Evanston, Ill.

BRIEFER ARTICLES.

New variety of Asclepias tuberosa.—Asclepias tuberosa is one of the well marked species of the genus, with its hairy stem (destitute of a milky juice), scattered leaves and orange-colored flowers. Only one variety, decumbens, is given in Gray's Synoptical Flora. A form different from this, and one which seems to be well entitled to a varietal name, has been in my herbarium for some years, and I now wish to characterize it as a new variety.

Asclepias tuberosa, var. *flexuosa*. Stem flexuous: leaves sub-opposite, a pair at each node: the flexuous stem is caused by a peculiar curvature of the internodes.—Cumberland mountains, Tennessee. *Miss M. Mohr.*—JOSEPH F. JAMES, *Oxford, Ohio.*

Exploding fruits.—While out collecting recently I gathered a considerable quantity of Euphorbia serpyllifolia in fruit. Upon arriving home the plants were taken from the press for examination, as a fungus was detected uponthe leaves. While attending to some other specimens I heard a strange little ticking sound which might be compared with the noise made by the little beetles often found in old furniture, known as "death-watch beetles." Upon examination, it was found that the ripe capsules were bursting open and scattering their seeds in all directions. The capsules are not two lines long, yet the explosive power of their elastic valves is so great as to throw the seeds fully three feet away. Many of these bursting capsules were watched, and the average distance seeds were thrown was about two feet, sometimes a little less and often a good deal more.—F. W. ANDERSON, *Great Falls, Mont.*